

Sequence Listing PCTUS04019934.txt
 SEQUENCE LISTING

<110> Felsenfeld, Dan P.
 Verse-Pierluissi, Maria A.

<120> METHODS AND AGENTS FOR TREATING AXONAL DAMAGE, INHIBITION OF
 NEUROTRANSMITTER RELEASE AND PAIN TRANSMISSION, AND BLOCKING
 CALCIUM INFLUX IN NEURONS

<130> 02420/100M761-US1

<150> 60/480,092
 <151> 2003-06-19

<150> PCT/US04/19934
 <151> 2004-06-21

<160> 27

<170> PatentIn version 3.3

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 <213> Artificial sequence

<220>
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Sequence Listing PCTUS04019934.txt

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Sequence Listing PCTUS04019934.txt

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35 40 45

Pro Thr Asp Asp Ile Ser Leu Lys Cys Glu Ala Arg Gly Arg Pro Gln
50 55 60

Val Glu Phe Arg Trp Thr Lys Asp Gly Ile His Phe Lys Pro Lys Glu
65 70 75 80

Glu Leu Gly Val Val Val His Glu Ala Pro Tyr Ser Gly Ser Phe Thr
85 90 95

Ile Glu Gly Asn Asn Ser Phe Ala Gln Arg Phe Gln Gly Ile Tyr Arg
100 105 110

Cys Tyr Ala Ser Asn Asn Leu Gly Thr Ala Met Ser His Glu Ile Gln
115 120 125

Leu Val Ala Glu Gly Ala Pro Lys Trp Pro Lys Glu Thr Val Lys Pro
130 135 140

Val Glu Val Glu Glu Gly Glu Ser Val Val Leu Pro Cys Asn Pro Pro
145 150 155 160

Pro Ser Ala Ala Pro Leu Arg Ile Tyr Trp Met Asn Ser Lys Ile Leu
165 170 175

Sequence Listing PCTUS04019934.txt

His Ile Lys Gln Asp Glu Arg Val Ser Met Gly Gln Asn Gly Asp Leu
180 185 190

Tyr Phe Ala Asn Val Leu Thr Ser Asp Asn His Ser Asp Tyr Ile Cys
195 200 205

Asn Ala His Phe Pro Gly Thr Arg Thr Ile Ile Gln Lys Glu Pro Ile
210 215 220

Asp Leu Arg Val Lys Pro Thr Asn Ser Met Ile Asp Arg Lys Pro Arg
225 230 235 240

Leu Leu Phe Pro Thr Asn Ser Ser Ser His Leu Val Ala Leu Gln Gly
245 250 255

Gln Ser Leu Ile Leu Glu Cys Ile Ala Glu Gly Phe Pro Thr Pro Thr
260 265 270

Ile Lys Trp Leu His Pro Ser Asp Pro Met Pro Thr Asp Arg Val Ile
275 280 285

Tyr Gln Asn His Asn Lys Thr Leu Gln Leu Leu Asn Val Gly Glu Glu
290 295 300

Asp Asp Gly Glu Tyr Thr Cys Leu Ala Glu Asn Ser Leu Gly Ser Ala
305 310 315 320

Arg His Ala Tyr Tyr Val Thr Val Glu Ala Ala Pro Tyr Trp Leu Gln
325 330 335

Lys Pro Gln Ser His Leu Tyr Gly Pro Gly Glu Thr Ala Arg Leu Asp
340 345 350

Cys Gln Val Gln Gly Arg Pro Gln Pro Glu Val Thr Trp Arg Ile Asn
355 360 365

Gly Met Ser Ile Glu Lys Val Asn Lys Asp Gln Lys Tyr Arg Ile Glu
370 375 380

Gln Gly Ser Leu Ile Leu Ser Asn Val Gln Pro Ser Asp Thr Met Val
385 390 395 400

Thr Gln Cys Glu Ala Arg Asn Gln His Gly Leu Leu Leu Ala Asn Ala
405 410 415

Tyr Ile Tyr Val Val Gln Leu Pro Ala Arg Ile Leu Thr Lys Asp Asn
420 425 430

Sequence Listing PCTUS04019934.txt

Gln Thr Tyr Met Ala Val Glu Gly Ser Thr Ala Tyr Leu Leu Cys Lys
435 440 445

Ala Phe Gly Ala Pro Val Pro Ser Val Gln Trp Leu Asp Glu Glu Gly
450 455 460

Thr Thr Val Leu Gln Asp Glu Arg Phe Phe Pro Tyr Ala Asn Gly Thr
465 470 475 480

Leu Gly Ile Arg Asp Leu Gln Ala Asn Asp Thr Gly Arg Tyr Phe Cys
485 490 495

Gln Ala Ala Asn Asp Gln Asn Asn Val Thr Ile Leu Ala Asn Leu Gln
500 505 510

Val Lys Glu Ala Thr Gln Ile Thr Gln Gly Pro Arg Ser Thr Ile Glu
515 520 525

Lys Lys Gly Ala Arg Val Thr Phe Thr Cys Gln Ala Ser Phe Asp Pro
530 535 540

Ser Leu Gln Ala Ser Ile Thr Trp Arg Gly Asp Gly Arg Asp Leu Gln
545 550 555 560

Glu Arg Gly Asp Ser Asp Lys Tyr Phe Ile Glu Asp Gly Gln Leu Val
565 570 575

Ile Gln Ser Leu Asp Tyr Ser Asp Gln Gly Asn Tyr Ser Cys Val Ala
580 585 590

Ser Thr Glu Leu Asp Glu Val Glu Ser Arg Ala Gln Leu Leu Val Val
595 600 605

Gly Ser Pro Gly Pro Val Pro His Leu Glu Leu Ser Asp Arg His Leu
610 615 620

Leu Lys Gln Ser Gln Val His Leu Ser Trp Ser Pro Ala Glu Asp His
625 630 635 640

Asn Ser Pro Ile Glu Lys Tyr Asp Ile Glu Phe Glu Asp Lys Glu Met
645 650 655

Ala Pro Glu Lys Trp Phe Ser Leu Gly Lys Val Pro Gly Asn Gln Thr
660 665 670

Ser Thr Thr Leu Lys Leu Ser Pro Tyr Val His Tyr Thr Phe Arg Val
Page 6

Sequence Listing PCTUS04019934.txt

675

680

685

Thr Ala Ile Asn Lys Tyr Gly Pro Gly Glu Pro Ser Pro Val Ser Glu
690 695 700

Thr Val Val Thr Pro Glu Ala Ala Pro Glu Lys Asn Pro Val Asp Val
705 710 715 720

Arg Gly Glu Gly Asn Glu Thr Asn Asn Met Val Ile Thr Trp Lys Pro
725 730 735

Leu Arg Trp Met Asp Trp Asn Ala Pro Gln Ile Gln Tyr Arg Val Gln
740 745 750

Trp Arg Pro Leu Gly Lys Gln Glu Thr Trp Lys Glu Gln Thr Val Ser
755 760 765

Asp Pro Phe Leu Val Val Ser Asn Thr Ser Thr Phe Val Pro Tyr Glu
770 775 780

Ile Lys Val Gln Ala Val Asn Asn Gln Gly Lys Gly Pro Glu Pro Gln
785 790 795 800

Val Thr Ile Gly Tyr Ser Gly Glu Asp Tyr Pro Gln Val Ser Pro Glu
805 810 815

Leu Glu Asp Ile Thr Ile Phe Asn Ser Ser Thr Val Leu Val Arg Trp
820 825 830

Arg Pro Val Asp Leu Ala Gln Val Lys Gly His Leu Arg Gly Tyr Asn
835 840 845

Val Thr Tyr Trp Trp Lys Gly Ser Gln Arg Lys His Ser Lys Arg His
850 855 860

Val His Lys Ser His Met Val Val Pro Ala Asn Thr Thr Ser Ala Ile
865 870 875 880

Leu Ser Gly Leu Arg Pro Tyr Ser Ser Tyr His Val Glu Val Gln Ala
885 890 895

Phe Asn Gly Arg Gly Leu Gly Pro Ala Ser Glu Trp Thr Phe Ser Thr
900 905 910

Pro Glu Gly Val Pro Gly His Pro Glu Ala Leu His Leu Glu Cys Gln
915 920 925

Sequence Listing PCTUS04019934.txt

Ser Asp Thr Ser Leu Leu Leu His Trp Gln Pro Pro Leu Ser His Asn
930 935 940

Gly Val Leu Thr Gly Tyr Leu Leu Ser Tyr His Pro Leu Asp Gly Glu
945 950 955 960

Ser Lys Glu Gln Leu Phe Phe Asn Leu Ser Asp Pro Glu Leu Arg Thr
965 970 975

His Asn Leu Thr Asn Leu Asn Pro Asp Leu Gln Tyr Arg Phe Gln Leu
980 985 990

Gln Ala Thr Thr Gln Gln Gly Pro Gly Glu Ala Ile Val Arg Glu Gly
995 1000 1005

Gly Thr Met Ala Leu Phe Gly Lys Pro Asp Phe Gly Asn Ile Ser
1010 1015 1020

Val Thr Ala Gly Glu Asn Tyr Ser Val Val Ser Trp Val Pro Arg
1025 1030 1035

Glu Gly Gln Cys Asn Phe Arg Phe His Ile Leu Phe Lys Ala Leu
1040 1045 1050

Pro Glu Gly Lys Val Ser Pro Asp His Gln Pro Gln Pro Gln Tyr
1055 1060 1065

Val Ser Tyr Asn Gln Ser Ser Tyr Thr Gln Trp Asp Leu Gln Pro
1070 1075 1080

Asp Thr Lys Tyr Glu Ile His Leu Met Arg Glu Lys Val Leu Leu
1085 1090 1095

His His Leu Ala Val Lys Thr Asn Gly Thr Gly Pro Val Arg Val
1100 1105 1110

Ser Thr Thr Gly Ser Phe Ala Ser Glu Gly Trp Phe Ile Ala Phe
1115 1120 1125

Val Ser Ala Ile Ile Leu Leu Leu Leu Ile Leu Leu Ile Leu Cys
1130 1135 1140

Phe Ile Lys Arg Ser Lys Gly Gly Lys Tyr Ser Val Lys Asp Lys
1145 1150 1155

Glu Asp Thr Gln Val Asp Ser Glu Ala Arg Pro Met Lys Asp Glu
1160 1165 1170

Sequence Listing PCTUS04019934.txt

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1175 1180 1185

Ala Phe Gly Ser Ser Gln Pro Ser Leu Asn Gly Asp Ile Lys Pro
1190 1195 1200

Leu Gly Ser Asp Asp Ser Leu Ala Asp Tyr Gly Gly Ser Val Asp
1205 1210 1215

Val Gln Phe Asn Glu Asp Gly Ser Phe Ile Gly Gln Tyr Ser Gly
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Sequence Listing PCTUS04019934.txt

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Sequence Listing PCTUS04019934.txt

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Ser

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Sequence Listing PCTUS04019934.txt

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